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ABSTRACT

A longitudinal study investigated maternal social support and its relationship to mother/child stress, the amount of stimulation provided the child, and the child's cognitive development. The data presented here represent the 18 to 24 month follow-up on a subset of families studied in 1981 and 1982 concerning current maternal social support and indices of mother/child stress, home stimulation, and the child's cognitive development. Participants were 38 mothers with a mean age of 23.7 years and their 18- to 24-month-old children. Measures administered included the Maternal Social Support Index, the Parental Stress Index, the Inventory of Home Stimulation, the Bayley Scales of Infant Development, and a demographic questionnaire. Results indicated that maternal social support is an important predictor of perceived mother/child stress. Further, the inclusion of maternal social support levels can meaningfully improve the predictability of the level of home stimulation above and beyond socioeconomic status data alone. Results suggest that the use of punishment and restriction increases as maternal social support decreases. Higher levels of mother/child stress are associated with a lack of stimulating play materials. No predictors of infant development were found. (RH)

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MATERNAL SOCIAL SUPPORT as a Predictor of MOTHER/CHILD STRESS and CHILD HOME STIMULATION in High Risk Families

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Maternal Social Support as a Predictor of Mother/Child Stress and Child Home Stimulation in High Risk Families

INTRODUCTION

There is an increasing body of empirical literature which has attempted to identify children who would be at "high risk" for abuse, neglect, lack of adequate stimulation, etc.. Studies of these children and their families often find that socio-economic (SES) variables are among the best predictors of these parent-child relationship difficulties. However, the amount of variance accounted for is limited. Obviously SES factors alone cannot possibly account for such family problems; most lower SES families do not have these problems and middle to upper SES families are certainly not "immune" to them. Increasingly, therefore, investigators have turned to more ecologically based models to identify the potential variables which mediate, or lead to the development of child maltreatment or inadequate stimulation/care within particular family systems.

Along these lines, several investigators have suggested that the amount of social support available to the family may be a key variable in determining the child's vulnerability to maltreatment (e.g. Garbarino and Stocking, 1980). While definitions of social support vary somewhat, most emphasize the factors which lead individuals to believe they are cared for, are esteemed, and have people they can turn to for information, aid, and emotional support in times of need (e.g.

Cobb, 1976). Typically, social support is conceptualized to act as a "buffer," which improves the individual's ability to deal with stressors. Thus an individual who has adequate social support may be less likely to be overwhelmed by any particular stressor, and may, as a result, be better able to deal with the pressures of being a parent. For example, social support might help a stressed parent by providing needed temporary "relief" from child care responsibilities, or support for inhibiting abusive impulses, or free time to provide positive stimulation to the child.

Of particular interest in this project is the relationship between the social support available to mothers and the mother/child relationship during the early years of the child's development. Retrospective research, as well as recent empirical findings has suggested that the greater the amount of social support available, the greater the mother's acceptance of the child and the greater the stimulation she provides the child (Cobb, 1976; Pascoe, Loda, & Jeffries, 1981; Pascoe, Walsh-Clifford, & Earp, 1982; and Pascoe & Earp, 1984). Such stimulation is believed to be vital to the optimum cognitive development of the child and is likely a component of more positive parent-child interactions.

The present study is a longitudinal investigation of maternal social support and its relationship with mother/child stress, amount of stimulation provided the child, and the child's cognitive development. In 1981 and 1982, information on the social support system of lower SES mothers was obtained at the time of their children's birth, along with a host of

other demographic and biological data. The data presented here represents the 18 to 24 month follow-up on a subset of those families with respect to current maternal social support and indices of mother/child stress, home stimulation, and the child's cognitive development.

PROCEDURES

Subjects

In 1981 and 1982, postnatal medical, SES, and maternal social support data were collected from 220 lower SES, "high risk" mothers and their newborn infants served consecutively by a community obstetrics-gynecology clinic in Northwest Ohio. An analysis of the first 100 children (the oldest members) in the cohort found that 14 families had already been referred to a children's services board for investigation of abuse or neglect. This was consistent with considering the full cohort "high risk." When one considers the possible additional unreported cases, those cases with children "failing to thrive," and those families who have relocated, it would appear appropriate to define this sample as "high risk" for child maltreatment problems.

The data reported here was obtained between February and June of 1984, during which an attempt was made to locate the families in which the child was under two years of age. Out of the 91 families with children who would have been less than two years old, 58 were successfully located. An initial letter was sent requesting participation in the present study. This was followed by a phone call and subsequent written consent. A token reimbursement of five dollars was offered. Of the 58 families successfully located, 38 agreed to partipate in the study.

The 38 participating mothers had a mean age of 23.71 years and had an average of 11.4 years of education. The children were between 18 and 24 months of age. There were 19

boys and 19 girls in our sample. There were 25 caucasian families and 13 minority families (hispanic or black). Family income averaged between $5,000 and $10,000 , with most provided by welfare, food stamps, or ADC.

Measures

In a two hour home visit, two trained psychology graduate students administered a demographic questionnaire and the following:

1) the Maternal Social Support Index (MSSI), which is a standardized interview, comprised of rational subscales which measure mother's perception of daily task sharing among family members, satisfaction with relationships, availability of emergency help, and degree of community involvement (Pascoe, et. al., 1982); (note that the same measure was given both prenatally and again, during the current follow-up);
2) the Parental Stress Index (PSI), which is a questionaire concerned with perceived mother/child stress related to stressful life changes and mother's perception of stress involved with childrearing. The PSI recognizes that both mother and child contribute to the stress of childrearing. The maternal stress domain measure's mother's tolerance for stress, the child stress domain measures the degree to which the child is difficult to rear, and the life stress domain measures the degree to which stressful events have occurred which

might excacerbate stress in the family. These scales have been factor analyzed and they appear to represent moderately distinct sources of stress (Abidin, 1983);

3) the Inventory of Home Stimulation (IHS), which is primarily an observational index of stimulation and interaction in the home, has six rationally derived subscales which quantify, through direct observations and questions, the mother's verbal and emotional responsiveness along with the ability to provide a stimulating, yet safe home environment (Caldwell and Bradley, 1975); and the

4) Bayley Scales of Infant Development, which are standardized indices of mental and motor development that yield developmental quotients based on national norms with a mean of 100, and a standard deviation of 15 (Bayley, 1969).

RESULTS

First, in an attempt to discern which factors were most related to perceived mother/child stress, some potentially relevent variables were entered into stepwise multiple regression analyses. The variables of interest included the MSSI subscales, income levels, and maternal education levels. The choice of variables was guided, in part, by past research findings.

The results of this analysis indicated that a four variable regression model accounted for 28.5 percent of the variance associated with mother/child stress. Three subscales of the maternal social support subscales accounted for 23.6 percent of this variance, while prenatal maternal income level accounted for the remaining 4.9 percent. The direction of the relationship between these maternal social support predictor variables and mother/child stress were negative while surprisingly, it was positive between income and stress. Thus it seems as though maternal social support is an important predictor of perceived mother/child stress.

Maternal social support was negatively related to mother/child stress ($r = -.339$, $p < .05$). It would seem that as social support increased, mother/child stress decreased. Mother/child stress, as measured by the PSI can be separated into three fairly independent components. This includes the maternal stress subscale, the child stress subscale, and the life stress subscale. In an attempt to discern which aspects of maternal social support were associated with these various

components of stress, the correlations between the mother/child stress and the maternal social support subscales were examined. Maternal stress was negatively associated with the degree to which mother had people she could "count on in times of need" (r= -.369, p<.05). The degree to which relatives were seen and mother was satisfied with the frequency of these visits at the time of birth was negatively associated with child stress scores on the PSI (r= -.394, p<.01). Events that have caused life stress were negatively related to the number of people mother "could count on in times of need" (r= .470, p<.01).

Many mothers have increased their affilliation with outside organizations since the birth of their child, presumably in an attempt to gain added support of some nature. Indeed, comparison of the maternal social support indices over the two year period between the birth of their child and the testing date suggests that the mother's perceived support has risen. Mean score of the MSSI at birth was 9.95, while it was 11.73 at 18 to 24 months. Correlation between the two administrations of the MSSI was .369 (p<.05).

Similarly, stepwise regression analyses were conducted in order to find which variables accounted for major portions of the variance associated with home stimulation provided the child. Again demographic variables such as income level, maternal education, maternal age, and race were entered. In addition, environmental variables such as mother/child stress scores and prenatal and current MSSI scores were entered into the stepwise regression equation.

The results of this analysis indicated that 38.4 percent of the associated variance was accounted for by four variables. Current maternal social support accounted for 15.8 percent of the variance, race accounted for an 11.5 percent increment (higher home stimulation for caucasian as opposed to minority families), a 7.7 increment was accounted for by income levels (higher income correlated with higher stress), and a 3.4 percent increment was accounted for by maternal social support at time of the child's birth. It seems as though the inclusion of maternal social support levels can meaningfully improve the predictability of the level of home stimulation above and beyond SES data alone.

To further explore these relationships, the correlations between individual MSSI and IHS subscales were examined. Social support was positively correlated with current child home stimulation (r=.393, p<.05). The specific social support items that seem highly related to home stimulation focus on the number of people who are depended upon "in times of need" (r=.336, p<.05) and the availability of another adult with which the mother can speak to regularly (r=.364, p<.05). The degree to which punishment and restriction are avoided, a very important aspect of the quality of home stimulation, was strongly related to maternal social support (r=.412, p<.01). It would seem that the use of punishment and restriction in dealing with one's child increases as maternal social support decreases.

Third, home stimulation provided the child was negatively correlated with the level of stress the mother experiences

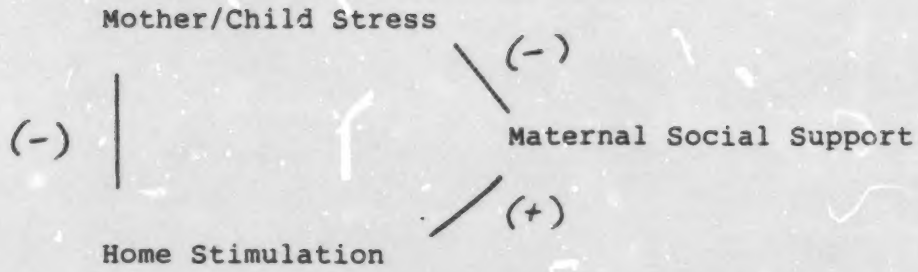
(r=-.466, p<.01). It seems as though the provision of appropriate play materials is the most negatively related aspect of this reduced home stimulation (r=-.575, p<.001). Higher levels of mother/child stress are associated with a lack of stimulating play materials provided the child by the mother.

Fourth, we were also interested in determining how well we could predict infant development at 18-24 months of age with these variables. Included in a stepwise regression analysis were MSSI (pre- and postnatally), IHS, income (pre- and postnatally), maternal education, maternal age, maternal IQ, and race. No meaningful prediction model could be generated.

CONCLUSIONS

It is emphasized that the results of the first phase of this longitudinal study were exploratory in nature. Conclusions derived must be tentative for several reasons. First, the sample size was limited. Cross validations of the results in this report need to be attempted before any definitive conclusions can be drawn. Second, the large number of variables, in combination with the small sample size requires considerable caution. Also, less than half the families from the original age-appropriate cohort participated. The sample may be biased to those families who were more stable (i.e. easier to locate). At the same time, however, it should be noted that the demographic data from the sample was representative of the demographic characteristics of the original cohort. The median amount of mother/child stress reported for this sample exceeds the 75th percentile of the normal population.

With the above caveats considered, it is suggested that maternal social support may play an important role in the subsequent level of mother/child stress and the amount of stimulation provided the child. The relationship between support and stress is negative, while the relationship between support and home stimulation is positive. In addition, the relationship between stress and home stimulation is negative. Schematically, this might be represented as:



This is important because conceptually maternal social support can be seen as a moderator which helps to "buffer" the negative effects of mother/child stress on the level of home stimulation provided the child. Conceptually, this moderator effect may also be operating for other parent-child relationship difficulties such as child abuse, child neglect, and failure to thrive.

These theoretical implications lead to possible preventative strategies designed to help increase the amount and improve the quality of home stimulation provided the child. These interventions could be "targeted" for mother, designed to provide a social support system that would be helpful to mother. The main factor that seemed to emerge in this study was in regards to mother having someone to "count on in times of need." The availability of temporary respite services, short stay daycare, group workshops, emergency counseling, long term supportive counseling and parental management training for "high risk" mothers undergoing stress may allow for increased home stimulation. Similarly, this will lead to fewer incidences of abuse or neglect, and presumably the realization of the developmental pote[illegible] of the child.

The results from this phase of our study did not support the notion that lowered levels of home stimulation are associated with lowered levels of infant development. However, this result is not particularly surprising because, (a) the negative aspects of a poor home environment may have cumulative effects that do not become manifested as developmental deficits until later in the child's development (Elardo, Bradley, and Caldwell, 1975), and (b) the measures of early infant behavior may not be sensitive to minor variations in development (Bloom, 1964). These possible explanations are further discussed in Ryan, Ullman, Adamakos, Diaz, Pascoe, and Chessare (1985). Currently, follow-ups with these families are being conducted. It is expected that developmental deficits will be realized at the three year level and will be manifested in differential verbal skills.

Social service/mental health agencies cannot provide for all members of the high risk population as defined by SES variables alone. However, consideration of maternal social support, in addition to SES variables, has improved our ability to predict both mother/child stress and home stimulation provided the child. Therefore, it would seem that the assessment of social support in lower SES families might allow for improved identification of families most highly in need of social service/mental health intervention. With this information, social service agencies can better utilize their preventative efforts by concentrating on variables more amenable to change and intervention.

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